

**Patent claims**

1. A run-to-run method for the computer-aided monitoring and controlling of a manufacturing process of a plurality of wafers,  
in which the wafers are subjected to at least one manufacturing step;  
in which at least one of the processed wafers is marked according to a deterministic selection criterion in such a way that it can be subjected to an inline SPC measurement;  
in which the manufacturing process is controlled on the basis of the result of the inline SPC measurement of the wafer, and  
in which at least one wafer necessary for the run-to-run method and also for the inline SPC method is selected according to the deterministic selection criterion.
2. The method as claimed in claim 1, in which the deterministic selection criterion is determined by means of rules.
3. A device for the monitoring and controlling of a manufacturing process of a plurality of wafers, with a processor which is set up in such a way that the following method steps of a run-to-run method can be carried out:  
carrying out at least one manufacturing step on the wafers;  
marking at least one of the wafers according to a deterministic selection criterion in such a way that it can be subjected to an inline SPC measurement, at least one wafer necessary for the run-to-run method and also for the inline SPC method being selected according to the deterministic selection criterion; and  
controlling the manufacturing process on the basis of the result of the inline SPC measurement.
4. A computer-readable storage medium, in which a program for the monitoring and controlling of a manufacturing process of a plurality of wafers is stored, the monitoring and controlling being carried out by means of a run-to-run method, which program executes the following method steps when it is run by a processor:  
carrying out at least one manufacturing step on the wafers;

marking at least one of the processed wafers according to a deterministic selection criterion in such a way that it can be subjected to an inline SPC measurement, at least one wafer necessary for the run-to-run method and also for the inline SPC method being selected according to the deterministic selection criterion; and

controlling the manufacturing process on the basis of the result of the inline SPC measurement.

5. A program element for the monitoring and controlling of a manufacturing process of a plurality of wafers, the monitoring and controlling being carried out by means of a run-to-run method, which element executes the following method steps when it is run by a processor:

carrying out at least one manufacturing step on the wafers;

marking at least one of the processed wafers according to a deterministic selection criterion in such a way that it can be subjected to an inline SPC measurement, at least one wafer necessary for the run-to-run method and also for the inline SPC method being selected according to the deterministic selection criterion; and

controlling the manufacturing process on the basis of the result of the inline SPC measurement.